

Application Serial No. 10/786,790
Reply to Office Action of December 19, 2008

PATENT
Docket: CU-3608

REMARKS

In the Office Action, dated December 19, 2008, the Examiner states that Claims 5 and 22-27 are pending and rejected. By the present Amendment, Applicant amends the claims.

Claim Objections

Claim 5 is objected to because the Office Action considers that the phrase "for solution" in its preamble is redundant. Applicant has deleted this phrase from Claim 5. Accordingly, Applicant respectfully requests withdrawal of the objection to Claim 5.

Rejections under 35 U.S.C. §112

Claims 5 and 22-27 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, Claim 5 is rejected because it recites a chemical formula and fails to define the symbol "n" of the formula. Applicant has amended Claim 5 to define the symbol "n" as an integer in a range of 0 to 6. Accordingly, Applicant respectfully requests withdrawal of the rejection of Claims 5 and 22-27 under 35 U.S.C. §112, second paragraph.

Rejections under 35 U.S.C. §103(a)

Claims 5 and 22-27 are rejected under 35 U.S.C. §103(a) as obvious over Kobayashi et al. (EP 0 932 081) in view of Yoichi et al. (JP 2000-053421) for the reasons of record. Applicant respectfully disagrees with and traverses this rejection.

The Office Action considers that Yoichi et al. teaches a neutral sol solution of titanium oxide and that Kobayashi et al. teaches a composition comprising titanium oxide and fluoroalkylsilane. Thereby, the Office Action further states that a person skilled in the art would be motivated to improve dispersibility of the titanium oxide contained in the composition of Kobayashi et al. and, as such, it would be obvious for a skilled person in the art to attempt adding the titanium oxide sol taught in Yoichi et al. to the composition of Kobayashi et al.

However, the reason why titanium oxide has excellent dispersibility in the titanium oxide sol of Yoichi et al. is because alkyl silicate stabilizes the dispersibility of titanium oxide during the hydrolyzation process. Thus, even if the titanium oxide sol, where the alkyl silicate is contained as a hydrolyzed state, is added to the composition of Kobayashi et al., the dispersibility of titanium oxide could not be improved because alkyl silicate is hydrolyzed prior to its addition to the composition.

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In view of this fact, one of ordinary skill in the art would have absolutely no expectation of success or motivation to combine the teachings of these two references.

According to the method suggested in the Office Action, a titanium oxide sol whose dispersability had been already stabilized is to be added to a composition where titanium oxide and fluoroalkylsilane are mixed. In such a case, the dispersion stabilization function of alkyl silicate to titanium oxide would have been exhausted during the preparing process of the titanium oxide sol. Therefore, even if the titanium oxide was added to the composition wherein titanium oxide and fluoroalkylsilane are mixed, no further dispersion stabilization of titanium oxide could be generated. This would be apparent for a skilled person in the art and, as such, a skilled person would not be motivated to add a titanium oxide sol with stabilized dispersibility to a composition where titanium oxide and fluoroalkylsilane are mixed. Further, even if a skilled person takes this method, unlike the present invention, he would not be able to obtain a coating solution having excellent dispersibility of titanium oxide. To state another way, the combination of these two prior art references would still fall short of yielding the claimed invention.

On the other hand, the method of producing a coating solution for forming a wettability-varied pattern recited in the present application is a method of mixing: the neutral sol solution, in which titanium oxide and alkyl silicate are mixed and the titanium oxide whose dispersibility is stabilized by the hydrolyzation of the alkyl silicate is contained; and the fluoroalkylsilane solution prepared separately. In such a method, it is possible to preliminary prepare a neutral sol solution of titanium oxide excellent in dispersibility and mix this while maintaining such dispersed state with a fluoroalkylsilane solution. As a result, it is possible to obtain a coating solution which contains titanium oxide and fluoroalkylsilane and which has excellent titanium oxide dispersibility.

Accordingly, Applicant respectfully requests withdrawal of the present rejection under 35 U.S.C. §103(a).

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In light of the foregoing response, all the outstanding objections and rejections are considered overcome. Applicant respectfully submits that this application should now be in condition for allowance and respectfully requests favorable consideration.

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Date

Respectfully submitted,



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